

2-45 REV 12 74



ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON, DELAWARE 19898

POLYMER PRODUCTS DEPARTMENT  
EXPERIMENTAL STATION

PERSONAL AND CONFIDENTIAL

cc: A. J. Dahl - 353  
B. W. Karrh - N11400  
L. J. Papa - 269  
Pral File  
I.C.

AR 226-1608

December 1, 1981

TO: DR. Y. L. POWER - PPD, Parkersburg

FROM: S. S. STAFFORD *S.S. / M*

ANALYSIS OF BLOOD SAMPLES FOR PERFLUOROOCTANOATE  
(Job No. 810-578; PRAL Nos. 81-5276-5312; Notebook Nos. E22514, E26238, E27432)

As requested in your letter of 11/4/81 to L. J. Papa, the 37 blood samples submitted have been analyzed for perfluorooctanoate ( $C_8$ ) by the usual gas chromatographic method ES-567. Results and sample identification are given in the attached table.

Attachment  
jah

Key Words:  
Perfluorooctanoate  
GC  
Blood Analysis

There's a world of things we're doing something about

EXP000069  
EID713883

000178

TABLE I  
CONCENTRATION OF PERFLUOROOCTANOATE IN BLOOD (a)

<u>Sample</u>			<u>GC Analysis</u>	(b)	
<u>P.R.A.L No.</u>	<u>Date Sampled</u>	<u>P.R.No.</u>	<u>Name</u>	<u>Date Analyzed</u>	<u>[C<sub>B</sub>], <math>\mu\text{g F/g blood}</math></u>
81-5276	10/20/81	3309		11/12/81	0.26
81-5277	10/20/81	3014		11/12/81	0.21
81-5278	10/20/81	0622		11/13/81	0.19
81-5279	10/21/81	3437		11/13/81	0.52
81-5280	10/21/81	4690		11/24/81	0.0078
81-5281	10/21/81	4750		11/13/81	0.052
81-5282	10/22/81	3524		11/13/81	0.12
81-5283	10/22/81	4687		11/13/81	0.012
81-5284	10/22/81	W.S.		11/13/81	0.12
81-5285	10/23/81	W.S.		11/13/81	1.7
81-5286	10/23/81	3743		11/13/81	0.49
81-5287	10/23/81	4556		11/13/81	1.0
81-5288	10/23/81	4072		11/23/81	0.13
81-5289	10/24/81	0976		11/23/81	0.10
81-5290	10/24/81	3237		11/23/81	0.21
81-5291	10/24/81	W.S.		11/23/81	0.12
81-5292	10/24/81	4310		11/23/81	0.67
81-5293	10/25/81	1502		11/23/81	0.78
81-5294	10/25/81	4596		11/23/81	0.21
81-5295	10/25/81	4711		11/23/81	0.015
81-5296	10/25/81	1925		11/23/81	0.15
81-5297	10/28/81	3625		11/23/81	0.30
81-5298	10/28/81	4531		11/23/81	0.86
81-5299	10/28/81	4074		11/23/81	0.38
81-5300	10/28/81	W.S.		11/23/81	0.057
81-5301	10/28/81	4504		11/24/81	2.5
81-5302	10/29/81	3037		11/24/81	0.80
81-5303	10/29/81	W.S.		11/23/81	1.1
81-5304	10/29/81	3278		11/24/81	2.6
81-5305	10/29/81	W.S.		11/24/81	0.15
81-5306	10/29/81	W.S.		11/24/81	0.42
81-5307	10/29/81	3781		11/24/81	0.12
81-5308	10/30/81	1753		11/24/81	0.19
81-5309	10/30/81	W.S.		11/24/81	0.082

EXPO000070

\*REDACTED\* EID713884

000179

TABLE I  
CONCENTRATION OF PERFLUOROOCTANOATE IN BLOOD (a)

<u>Sample</u>	<u>PRAL No.</u>	<u>Date Sampled</u>	<u>P.R. No.</u>	<u>Name</u>	<u>GC Analysis</u>	<u>Date Analyzed</u>	<u>[C<sub>8</sub>], <math>\mu\text{g F/g blood}</math></u>	(t)
81-5310		10/30/81	1567			11/24/81	0.22	
81-5311		11/3/81	W.S.			11/24/81	0.33	
81-5312		11/3/81	4345			11/24/81	0.52	

- (a) Analysis as described in Lab Method ES-567 ("Determination of Perfluorooctanoic Acid in Blood, Gas Chromatographic Method", S. Stafford, 4/3/81), using the packed column GC analysis with perfluoro-n-octanoic acid as calibration standard.
- (b) Although the analysis is specifically for perfluorooctanoate (acid or salts), concentrations are given in ppm fluorine for comparison with the results of total organic fluorine analyses. ( $\text{ppm F} = 0.688 \times \text{ppm perfluorooctanoic acid}$ ) Estimated uncertainty is  $\pm 10\%$  relative standard deviation. The lower limit for quantitation is  $0.007 \mu\text{g F/g}$ . The detection limit is  $\sim 0.004 \mu\text{g F/g}$ , but concentrations in that range cannot be well quantitated and are reported as  $< 0.007$ . None detected (n.d.) is reported for samples with  $[\text{C}_8] \lesssim 0.004 \text{ ppm}$ , which cannot be distinguished from reagent background.

EXPO000071  
\*REDACTED\* EID713885

000180